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PATENT SPECIFICATION

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COMPLETE SPECIFICATION.

"Improvements in or relating to movable supports."

We, KENNETT BROS. AND RAYNER PROPRIETARY LIMITED, a Company registered under the laws of the State of Victoria, having its registered office at 5 Wells Road, Oakleigh, in the State of Victoria, Commonwealth of Australia, Manufacturers, hereby declare this invention and the manner in which it is to be performed to be fully described and ascertained in and by the following statement:—

This invention relates to movable supports or platforms which require periodically to be brought into operative position from an inoperative or concealed position, and vice-versa.

More particularly the invention relates to a support which, when not required for use, is moved into a position in which it is entirely or partially concealed from view and/or into a position where the support and the apparatus thereon are causing little or no obstruction.

The primary object of this invention is to provide a movable supporting structure which is particularly useful in confined spaces such as in Offices, small workshops or behind sales counters. A particular application of the invention is for supporting a typewriter in association with an office table or desk.

A further object is to provide a support which is brought into working position with a minimum of manual exertion.

Another object of this invention is to provide a supporting device of simple construction which is readily accessible, may be economically manufactured, and is easily adaptable as an auxiliary support for existing furnishings.

It has previously been proposed to equip counters, desks and the like with an auxiliary supporting device for apparatus which is not in continual use and which may be moved into an inoperable or storage position for purposes of space economy and/or appearance. These prior constructions, however, suffer from disadvantages such as cumbersome arrangements requiring specially constructed main desks, counters and the like. Further, these known constructions require excessive manual exertion for their

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movement.

It is now proposed to overcome these and other disadvantages and with the above objects in view, the movable support comprises a framework for attachment to the underside of a table, desk, counter, workbench or the like, a table or platform, means for operatively connecting said table or platform to said framework, said means including at least one pair of substantially parallel rigid links, and resilient means for retaining the table or platform in the inoperative or operative positions and for assisting the movement of said table or platform from one position to the other.

For a better understanding of the function and use of the movable support an embodiment of the invention when employed in conjunction with, and as an auxiliary for, an office type desk, will be described hereinafter with reference to the accompany drawings in which:—

Figure 1 is a perspective view of the desk showing the auxiliary support in working position.

Figure 2 is an end elevation of the desk with the end wall removed to show the movable support in its inoperative or concealed position.

Figure 3 is a view similar to that shown in Figure 2 but with the support in its operative or extended position.

Figure 4 is a plan view of Figure 3 parts being removed or broken away for convenience of illustration.

According to the invention, a bracket or mounting 6 has a plurality of depending flanges 7 integral therewith or fixedly attached thereto and is fastened by any suitable means to the underside of the working surface 8 of a table, desk or the like object. The flanges 7 are hereinafter referred to as head flanges. The bracket or mounting 6 and depending flanges 7 constitute a framework.

Attached, at different heights, to the depending head flanges 7 are two spaced parallel horizontal rods, 9, 11, the upper rod 9 being in a position which is near the front of the head flanges 7 whilst the lower rod 11 is near the rear of said flanges.

A board 12 constitutes the platform or table of the improved movable support, and has integral therewith or fixedly attached thereto a plurality of depending flanges 13, hereinafter referred to as table flanges. Attached at different heights to the table flanges 13 are two parallel, spaced horizontal rods 14, 16 which are positioned in a manner similar to the rods of the bracket.

Each end of the upper rod 9 is pivotally connected by a rigid link 17 to the corresponding end of the upper rod 14 whilst each end of the lower rod 11 is similarly connected by link 18 to the corresponding end of the lower rod 16. The links are preferably of predetermined length so that a downward and inward force applied to the supporting platform or table 12 will result in a motion which substantially eliminates tilting of said table. Hence, the apparatus, for example a typewriter, situated on the platform or table 12 of the movable support will not be upset when the support is moved into the inoperative and/or concealed position.

In order that a minimum of effort will be necessary to move the support from its lower storage position to a higher, forward working position, a tension spring 19 is provided, the upper end of which is attached to an extension 21 on one of the links 18. Said extension 21 should be provided with a projection which, when the support is in its storage position, will bear against bracket 6 or flange 7 and act as a stop to limit table movement beyond a predetermined point. Said predetermined point will mainly depend on the length of table or platform 12. If desired, a second spring 22 may be employed which would be attached to a corresponding extension on the other link of the pair. The ends of extensions 21 are preferably connected by a rod 23 in which case the spring or springs may be attached to the rod 23 instead of to extensions 21. Also, rod 23 may then act as the stop to bear against bracket 6 or flange 7 in lieu of the aforementioned projection on a single extension 21.

The lower end of the spring or springs is suitably attached to the floor or to a lower cross strut 24 of the desk, counter and the like or to the base 26 of same.

The design of the tension spring or

springs with respect to tensile force will vary according to the weight of the supporting platform or table and its attachments and the weight of the apparatus to be supported thereby. In addition, allowance should be made for any manual pressure exerted on the apparatus being supported, and the position of such apparatus on the platform relative to the pivot points of the rods 14, 16.

In a preferred form of the invention, however, the spring or springs will be of standard design, the above variable factors being provided for by adjusting the effective length of the spring when in its position of static deflection. This may, for example, be effected by means of a screw 27 and nut (not shown). The screw, may protrude through an aperture in the aforementioned lower cross strut 24 or base 26, and may be freely attached to the bottom convolution being bent into a hook shape for the purpose. The nut may engage the screw on the underside of the said cross strut or base and may be tightened until the required tensile force to be exerted by the spring is obtained.

This above described preferred form of the invention will assist in simple and rapid installation of the movable support and the adjustment of the tension of the spring should be the only adjustment required to allow for the particular conditions.

In the embodiment illustrated in the drawings, the auxiliary support is mounted inside the desk in a cupboard like compartment towards one side of the person sitting at said desk and may be normally screened from view by a hinged door 28. The bracket 6 of the support is secured to the underside of the surface 8 of the desk and the spring or springs to the base 26 of the compartment, as previously described. The table or platform may, for instance, support a typewriter.

If it is desired to operate a typewriter any papers, books or the like on the desk may be left undisturbed since the typewriter may be operated on the table or platform 12. For this purpose the door 28 may be opened and a pull exerted on the table or platform 12 will cause the table or platform 12 to move forwardly until the spring (springs) has just passed its vertical position. The spring will then assist the movement of the table or platform 12 in a forward and upward direction until it reaches the position shown in Figures 1 and 3, the table or platform 12 remaining in a substantially horizontal position throughout its movement.

The force of the spring will tend to prevent the table from moving downwardly and rearwardly into the compartment when pressure is exerted on said table due to the typing action.

When it is desired to move the table or platform into its concealed position a downward force is applied to said table until the spring (springs) just passes the dead centre position on its return motion when it will assist in returning the table or platform 12 with the typewriter thereon further into its compartment.

Having now fully described and ascertained our said invention and the manner in which it is to be performed we declare that what we claim is:—

1. A movable support to be brought into operative position from an inoperative position by a simultaneous forward and upward movement thereof, and vice versa, comprising a stationary rigid framework for attachment to the underside of a table, counter, workbench or the like, a table or platform, means for operatively connecting said table or platform to said framework, said means including at least one pair of substantially parallel rigid links, each link being pivotally connected adjacent each end to said platform and said framework, and resilient means for retaining the table or platform in the inoperative or operative positions and for assisting the movement of said table or platform from one position to the other.

2. A movable support adapted to be brought into operative position from an inoperative or concealed position, and vice versa, comprising a bracket for attachment to the underside of a table, desk, counter, workbench or the like, a plurality of head flanges depending from said bracket, a platform or table having a corresponding number of depending table flanges, a pair of spaced parallel rods rotatably attached at different heights to, and extending perpendicular to the plane of, said head flanges, a further

pair of parallel rods rotatably attached at different heights to, and extending perpendicular to the plane of, said table flanges, rigid links pivotally connected between said pairs of rods, and resilient means for retaining said table in the operative and inoperative, positions and for assisting movement of said table or platform from one position to the other.

3. A movable support according to claim 1, wherein said connecting means also includes a pair of spaced parallel rods rotatably attached to said framework, and a further pair of spaced parallel rods rotatably attached to said table or platform, said links extending between and being pivotally connected to the ends of said pairs of rods.

4. A movable support according to claims 1, 2 or 3 wherein at least one of said rigid links includes an extension whereby said resilient means is operatively connected to said table or platform.

5. A movable support according to any one of the preceding claims wherein said resilient means comprises one or more tension springs, tension adjusting means being provided whereby the tensile force of said tension spring or springs may be varied.

6. A movable support according to claim 5 wherein said tension adjusting means comprises a screw adapted to be adjustably secured to said table, desk, counter, workbench or the like, and a nut mounted on said screw whereby the effective length of said screw may be varied.

7. A movable support according to claim 4, wherein a plurality of extensions are provided, said extensions being rotatably attached to a transverse rod which is adapted to function as a stop whereby inward movement of said table or platform beyond a predetermined point is prevented.

8. A movable support according to claim 1 or claim 2 as exemplified in the drawings.

9. A movable support consisting in the combination and arrangement of parts constructed and adapted to operate substantially as described with reference to the accompanying drawings.

Dated this 19th day of June A.D. 1953
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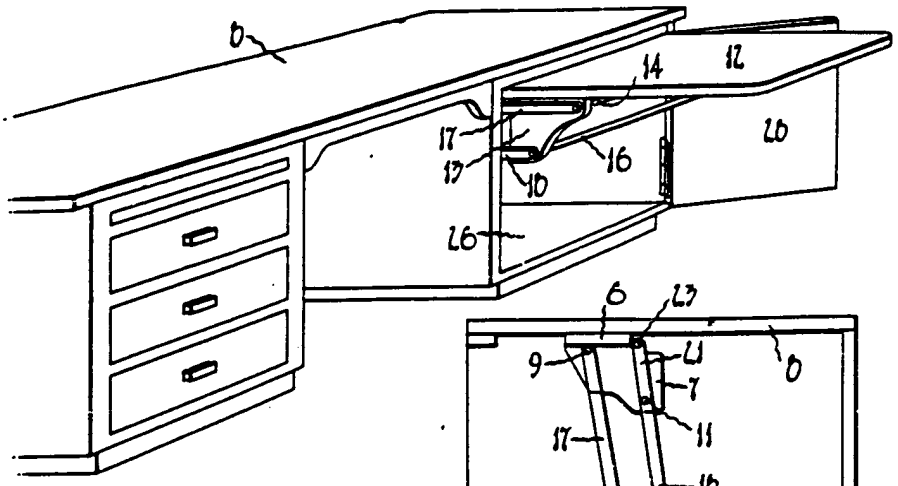

FIG. 1.

FIG. 2.

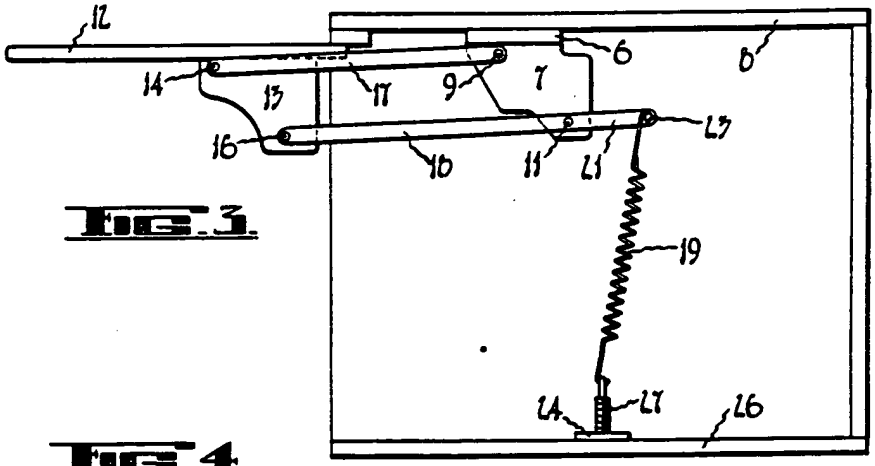

FIG. 3.

FIG. 4.